

Poland is not replicating the HTP experience in Japan: a cautionary note

In a 2019 article, Stoklosa *et al* found that the introduction of heated tobacco products (HTPs) to the Japanese market was strongly associated with a decline in cigarette sales.¹ This paper and another by Cummings *et al*² provide suggestive evidence that the Japanese population replaced cigarettes sold with HTPs. Instead of delivering nicotine from tobacco leaves through combustion, HTPs heat tobacco to considerably lower temperatures and deliver nicotine to users via an aerosol containing fewer toxic substances than cigarettes and could reduce health risks for users.² If this pattern of substitution in Japan reflects persistent individual behaviour changes, then health improvements could follow.

Philip Morris International has used this independently produced research to lobby governments to gain favourable terms of market access for their HTPs.³ However, it merits examining whether trends in Japan mirror changes elsewhere. In particular, we explore Poland, 1 of about 60 other countries where HTPs are sold, because it has some key differences with Japan: HTPs were introduced in Japan in 2015, and in Poland in 2017, e-cigarette sales are not allowed in Japan but are sold in Poland, and HTP excise taxes as a per cent of retail prices in 2020 were 43% in Japan and 12.4% in Poland.⁴ However, in 2019, both markets had similar shares of menthol cigarette sales and similar levels of male smoking.⁵ Further in both countries, in the 5 years before the entry of HTPs to each country, per capita sales of cigarettes declined by an average of 4.7% per year.⁵

Here, we employ a limited sales dataset to explore whether the HTP market trajectory in Poland resembles that in Japan. We obtained data on monthly sales of cigarettes, roll-your-own tobacco (RYO), e-cigarettes and HTPs at a national level in Poland from NielsenIQ covering the period from May 2018 to April 2021. We excluded e-cigarette sales because Nielsen captured less than 20% of sales while capturing large majorities of other categories (determined by Euromonitor estimates of total value sales⁵). In figure 1, we plot unit sales and inflation-adjusted 20-stick-pack equivalent prices by tobacco product in Poland.⁶

In the first 4 years of HTP availability in Japan, HTP sales increased to 22.9% of combined cigarette and HTP sales, while cigarette sales volumes fell 45%.⁵ In Poland, we do not observe an obvious replacement of cigarette sales with HTP sales in the form of rising HTP sales corresponding with falling cigarette sales. Cigarette sales continue to fluctuate on a seasonal basis and remain relatively flat. Total tobacco sales (combined cigarette, HTP and RYO) are rising, largely due to HTP sales, which grew 13-fold in volume in 3 years, rising from 0.5% to 6.5% of the total tobacco market. RYO sales also grew during this period but half as fast as HTPs, from 7.5% to 10.6% of total tobacco sales. Accordingly, the Eurobarometer survey from September 2020 had past-month use among Polish adults at 1.0% for HTPs, 1.2% for e-cigarettes with nicotine, 4.4% for RYO tobacco and 21.8% for manufactured cigarettes.⁷

Prices for HTPs were initially higher than cigarettes, but real HTP pack prices declined 15.4% over the study period, while cigarette prices simultaneously declined by 5.3%. In July 2019, HTP pack prices sank below that of cigarette pack prices, providing a small incentive to use HTPs over cigarettes. RYO prices remained well below cigarettes and HTPs, but they too declined by 8.8% during the study period. HTP device prices have also declined 50.3% from 2020 to 2021. A pack-a-day smoker still needs to consume a pack of HTPs instead of cigarettes for 77 days in 2021 (down from 113 days in

2020) to recoup their initial purchase cost of a reusable tobacco heating device.⁸

The experience of Poland with HTPs has not mimicked sales trends in Japan. Before the entry of HTPs, cigarette sales volumes declined at equivalent rates in both countries,⁵ but on HTP entry, those patterns diverged. In Poland, HTP sales appear to stack on top of existing cigarette sales, whereas in Japan cigarette sales have declined in parallel with the introduction of HTPs. It is not clear why the HTP experience in Poland differs from Japan, although several possible explanations exist. In Poland, e-cigarette availability could potentially provide competition for HTP products as substitutes for cigarettes, although this possibility is complicated by the fact that smokers in Poland overwhelmingly believe e-cigarettes are as dangerous as tobacco cigarettes.⁹ The price differential between cigarettes and HTPs could contribute to this pattern, however, Poland levies less excise tax as a share of price on HTPs than Japan.⁹ Market competition could be responsible for these patterns, as Philip Morris International, the largest manufacturer of HTPs in both Poland and Japan, has the largest share of the cigarette market in Poland, whereas, in Japan, Japan Tobacco dominates the cigarette market.⁵

We should not take Japan's HTP experience as inevitable in all markets. The experience of cigarette sales declining in parallel with an increase in HTP sales in Japan has not materialised in Poland. Further work should examine HTP markets to better

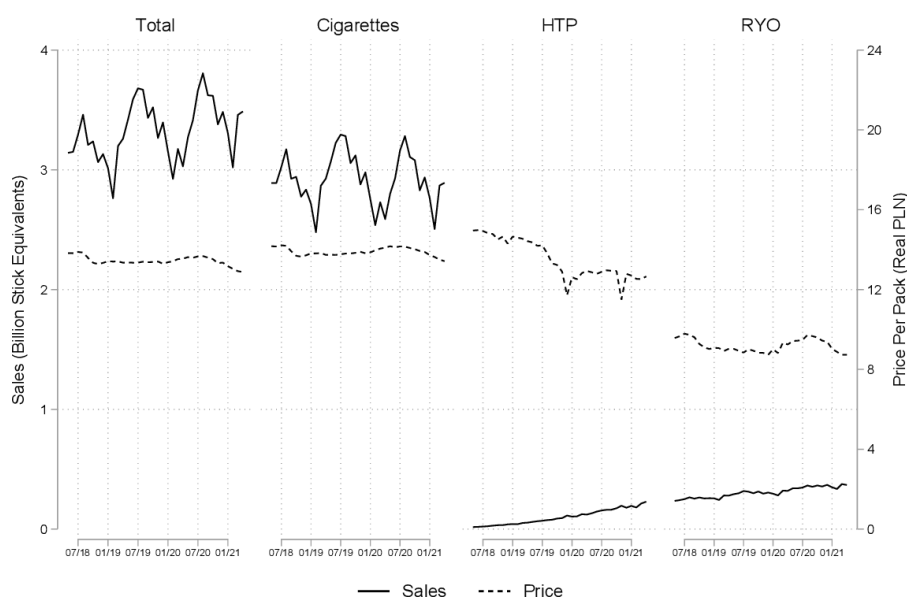


Figure 1 Monthly tobacco sales and prices in Poland by category (millions nominal PLN). HTP sales refer to heated tobacco sticks and exclude heating devices. Prices are in PLN, the official currency of Poland. HTP, heated tobacco product; PLN, Polish zloty; RYO, roll-your-own.

understand product substitution patterns and determine what tobacco control policies best reduce overall tobacco-related harm.

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